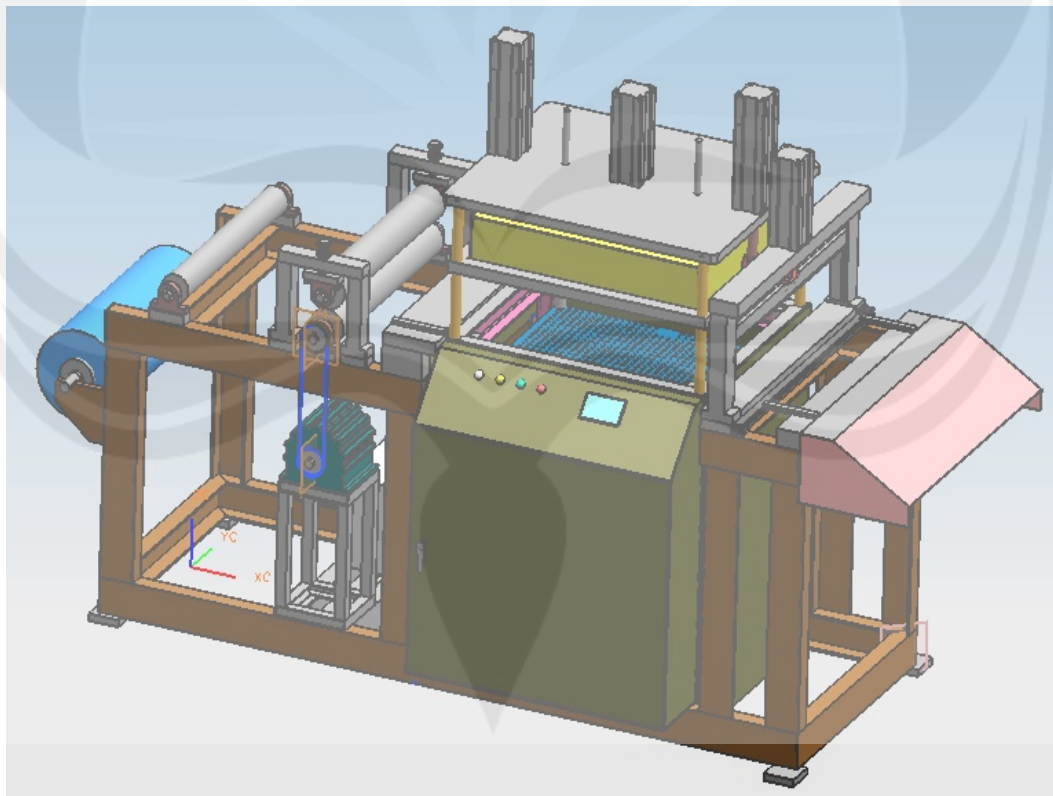


BAB 6

KESIMPULAN DAN SARAN

6.1. Kesimpulan

Hasil perancangan sesuai dengan tuntutan narasumber dan menggunakan metode perancangan secara rasional untuk mesin *vacuum thermoforming* otomatis dapat digambarkan secara 3D seperti berikut.



Gambar 6.1. Gambar 3D Mesin Vacuum Thermoforming Otomatis

Spesifikasi dari mesin *vacuum thermoforming* otomatis ini ditampilkan dalam tabel berikut.

Tabel 6.1. Spesifikasi Mesin Vacuum Thermoforming

Otomatis

Dimensi Mesin	130 x 50 x 85 cm
Motor	Baldor 220 VAC, 550 Watt
<i>Inverter</i>	Baldor VS1SP
<i>Pneumatic Cylinder</i>	DSC Tipe K400-40-6-1
Kapasitas hisap vakum	10 bar
Temperatur maksimal heater	400°C
Biaya total	Rp. 28.979.505,-

Mesin *vacuum thermoforming* otomatis ini lebih efisien daripada mesin *vacuum thermoforming* manual, hal ini dapat dilihat dari perbandingan output produk yang dihasilkan selama 1 jam.

6.2. Saran

Secara teoritis mesin ini sudah layak dari segi teknis dan ekonomis. Untuk penelitian selanjutnya diharapkan agar mesin ini dibuat atau direalisasikan agar dapat diuji performansinya.

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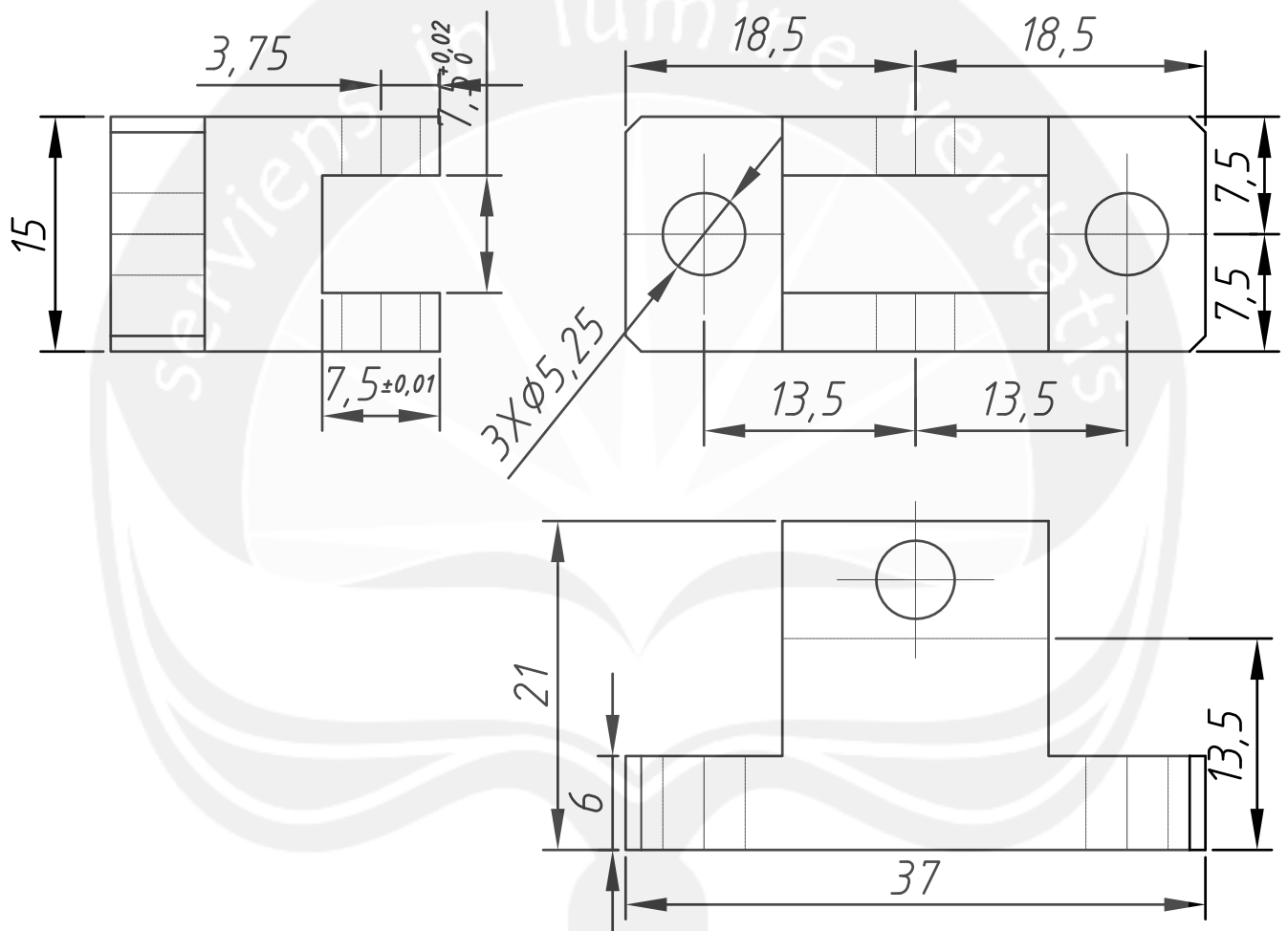
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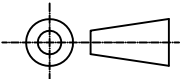
(<http://www.custompartnet.com/wu/images/thermoforming/vacuum-forming.png>). Diakses jam 20.03 (Kamis / 17 Maret 2011)

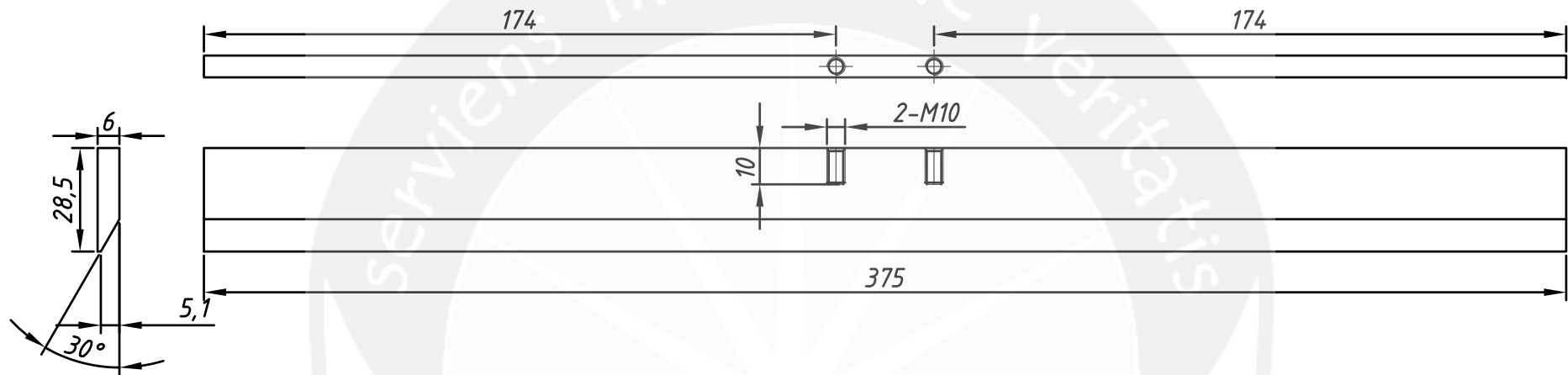
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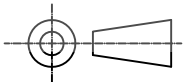
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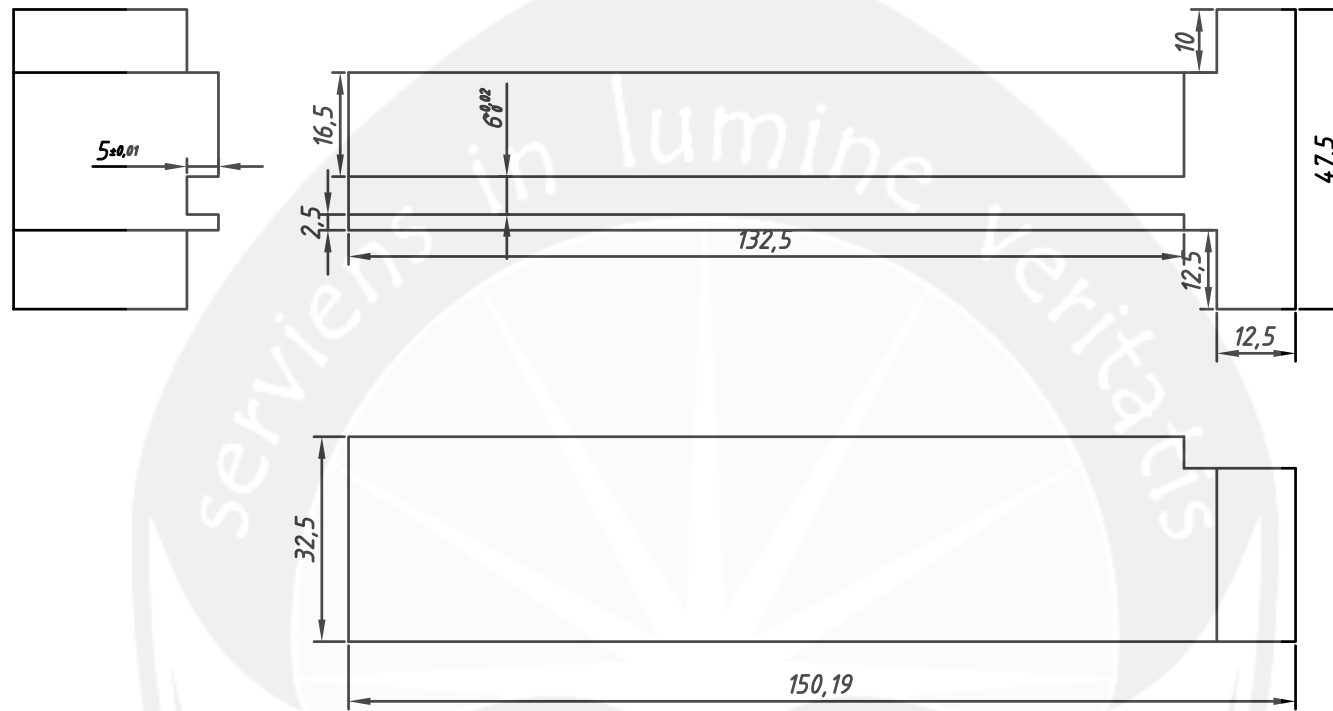


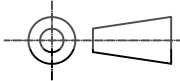


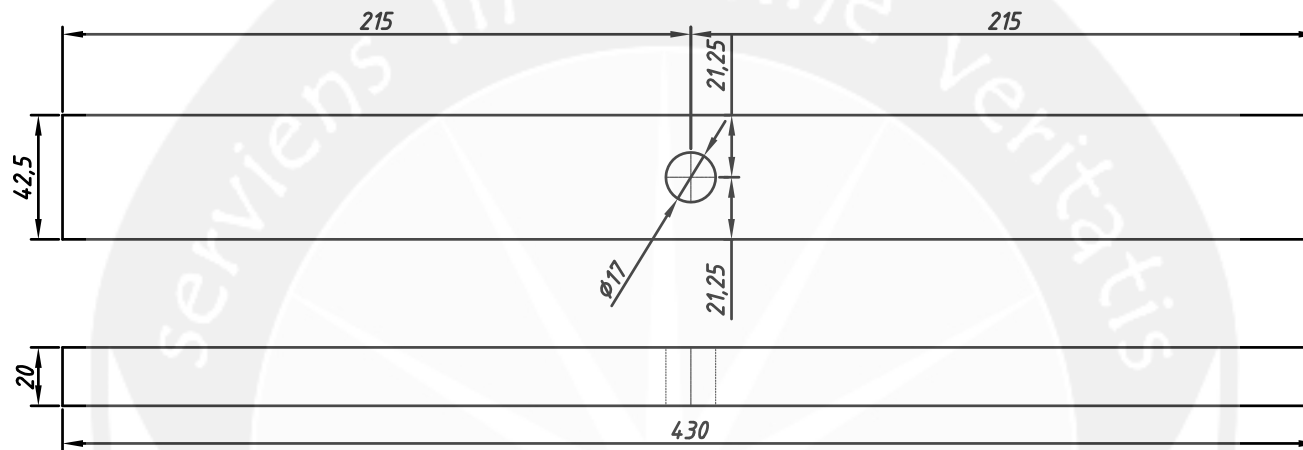
2	Cylinder bracket	5			
Pieces	Description	Item	Material	Dimension	Remarks
Revision Index		Drawn by : Galih		Scale : 1:1	
		Reg. Nr. : 101606381		Unit : mm	
		Date : 11102011		Material : SS41	
		Checked by : Wisnu		Sign. :	
		A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY				Operation Milling	Dwg. Nr. 1405
Origin.		Rep.		Rep.by.	Sn. Ns.

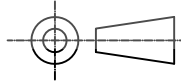


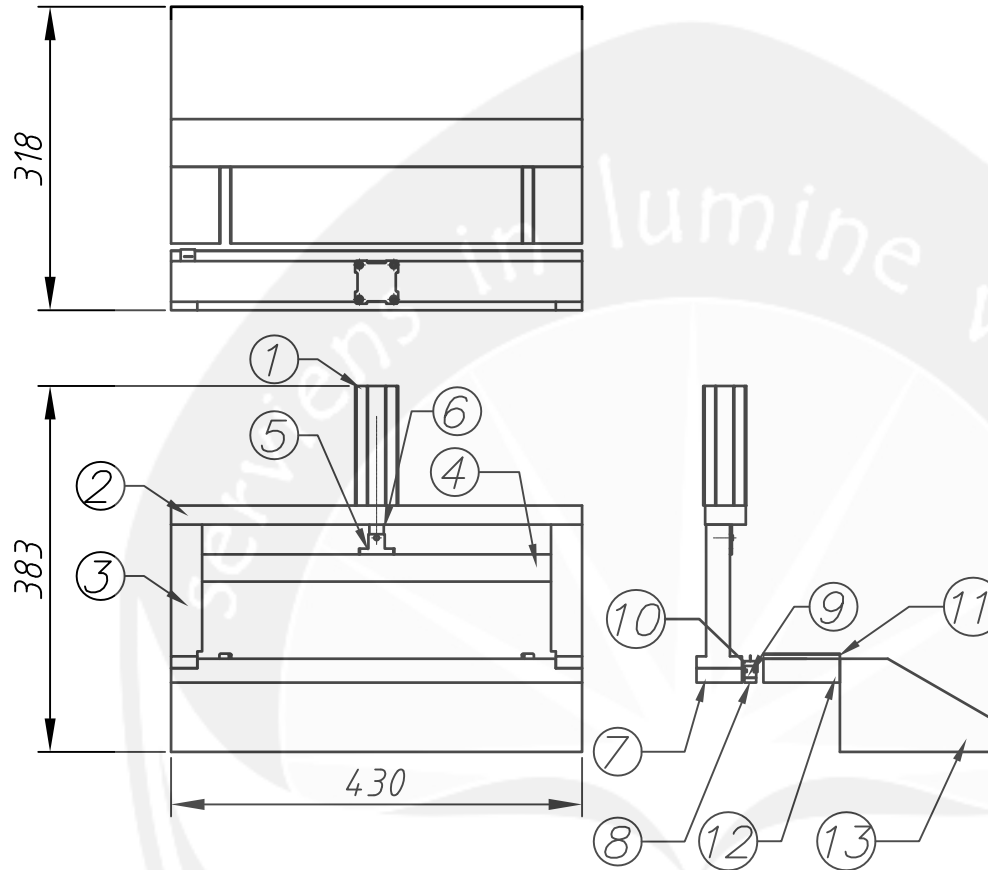
1	Clamp 2	4			
Pieces	Description	Item	Material	Dimension	Remarks
Revision Index		Drawn by : Galih			Scale : 1:1
		Reg. Nr. : 101606381			Unit : mm
		Date : 11102011			Material : SS41
		Checked by : Wisnu			Sign. :
		A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY				Operation Milling	Dwg. Nr. 1404
Origin.		Rep.		Rep.by.	Sn. Ns.



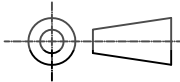
1	Clamp guide	3			
Pieces	Description	Item	Material	Dimension	Remarks
Revision Index		Drawn by : Galih			Scale : 1:1
		Reg. Nr. : 101606381			Unit : mm
		Date : 11102011			Material : SS41
		Checked by : Wisnu			Sign. :
		A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY				Operation Milling	Dwg. Nr. 1403
Origin.	Rep.		Rep.by.		Sn. Ns.

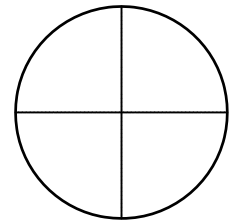
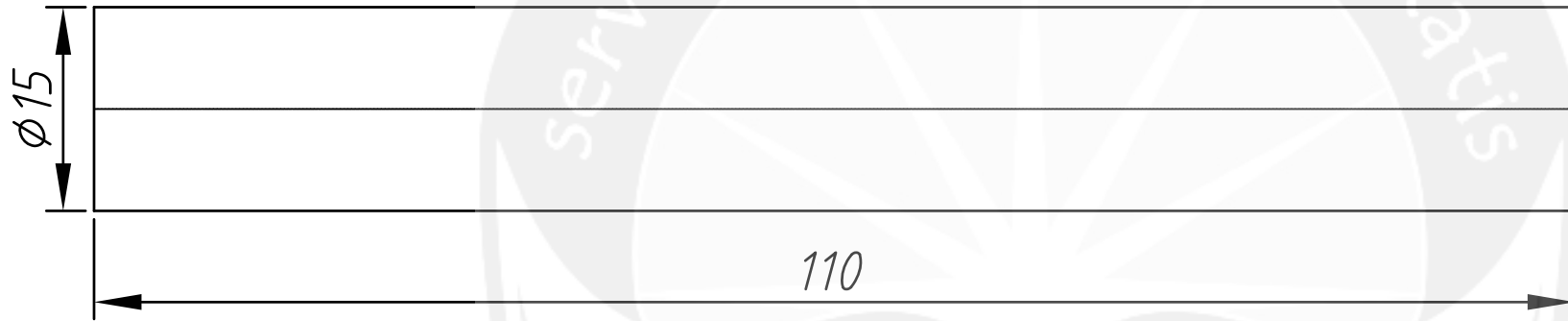


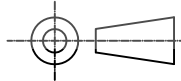
1	Cylinder stand	2			
Pieces	Description	Item	Material	Dimension	Remarks
Revision Index		Drawn by : Galih			Scale : 1:1
		Reg. Nr. : 101606381			Unit : mm
		Date : 11102011			Material : SS41
		Checked by : Wisnu			Sign. :
		A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY				Operation Milling	Dwg. Nr. 1402
Origin.		Rep.		Rep.by.	Sn. Ns.

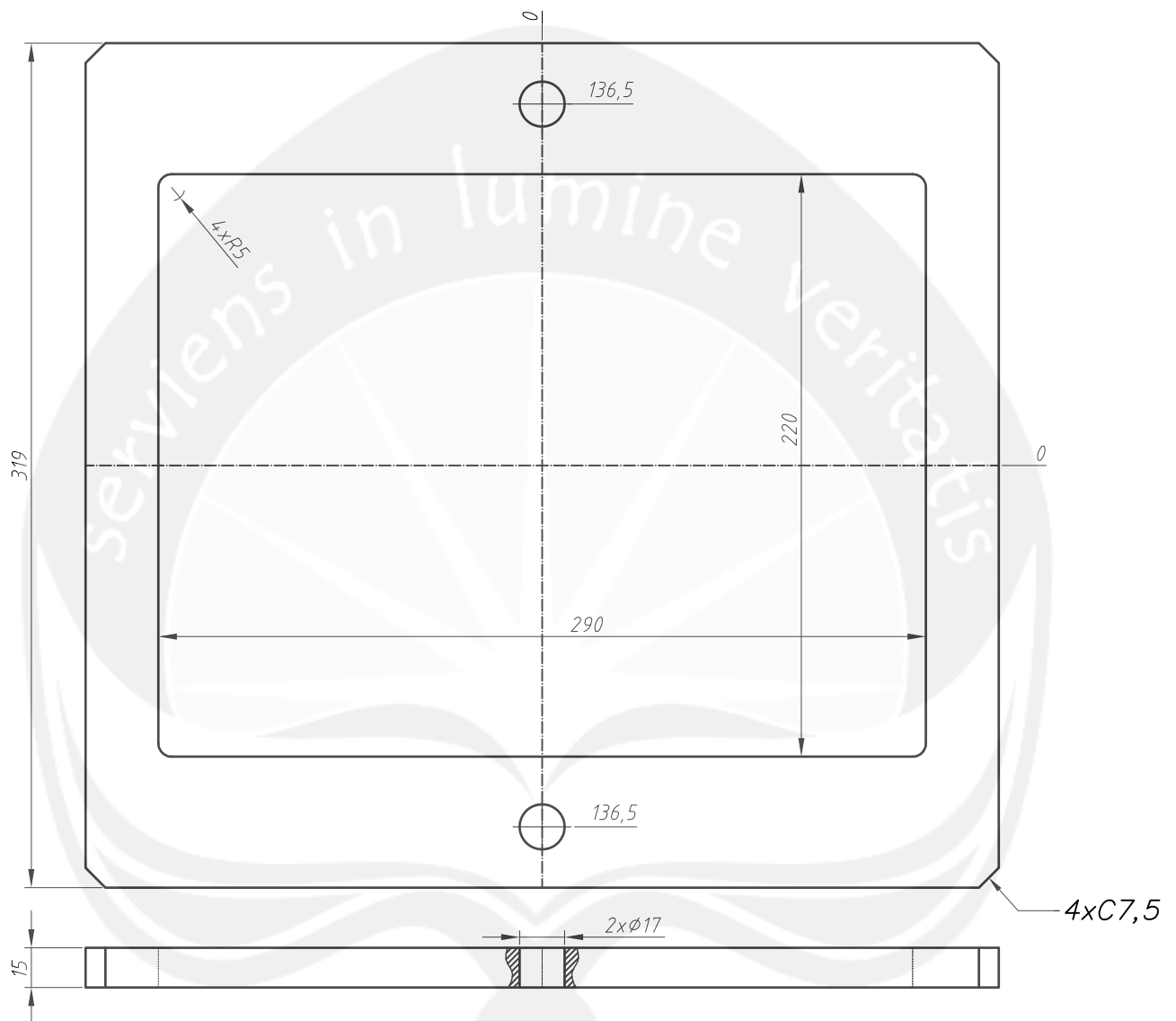


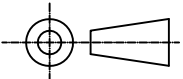
Isometric View

	Sub Assy 4 (Cutter Unit)						
Pieces	Description		Item	Material	Dimension	Remarks	
Revision Index			Drawn by : Galih		Scale : 1:1		
			Reg. Nr. : 101606381		Unit : mm		
			Date : 11102011		Material :		
			Checked by : Wisnu		Sign. :		
			A4	MESIN VACUUM THERMOFORMING OTOMATIS			
INDUSTRIAL ENGINEERING UAJY					Operation		Dwg. Nr. 1400
Origin.		Rep.		Rep.by.		Sn. Ns.	

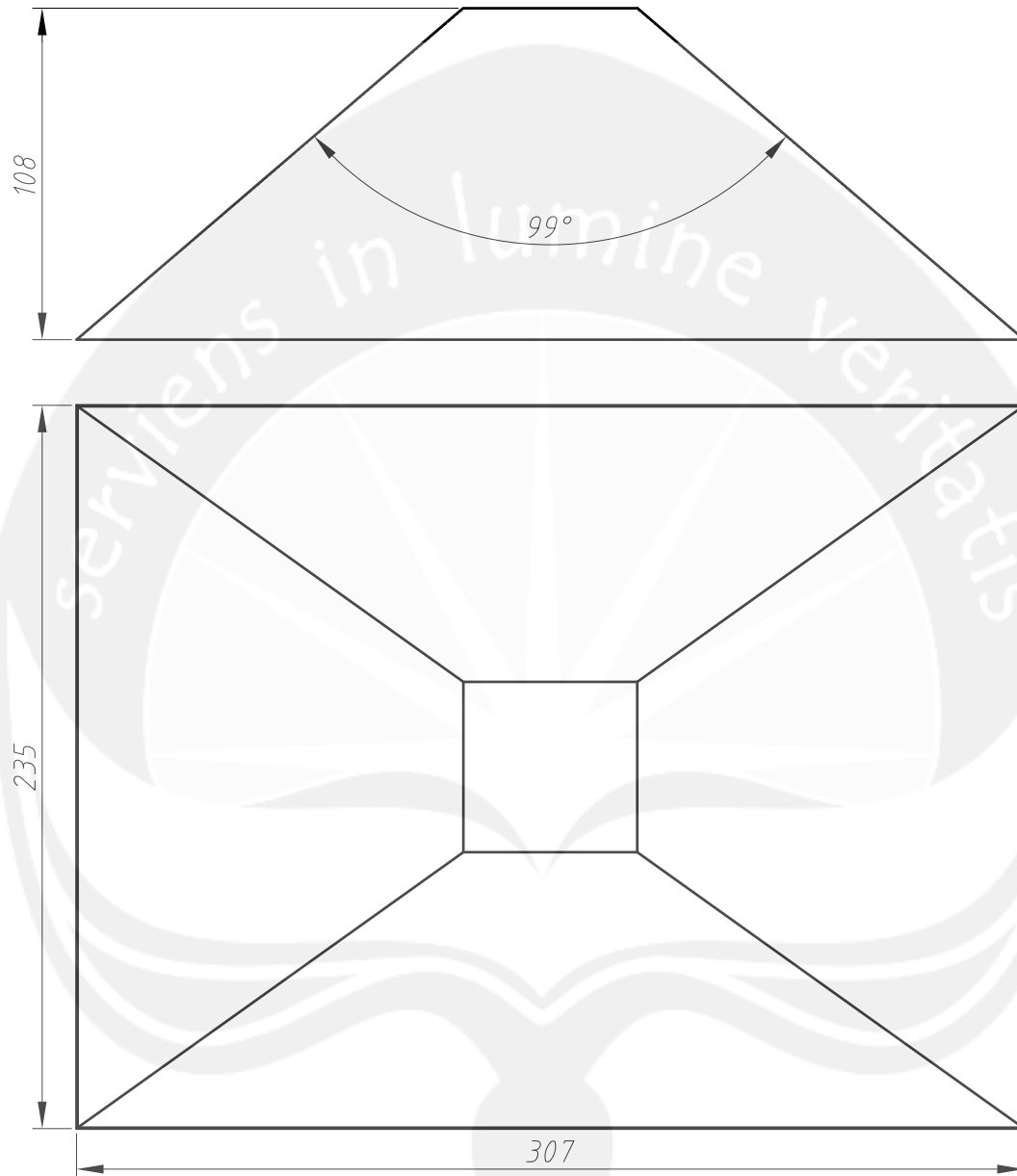


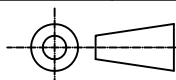
4	Core stand guide	4			
Pieces	Description	Item	Material	Dimension	Remarks
Revision Index		Drawn by : Galih			Scale : 1:1
		Reg. Nr. : 101606381			Unit : mm
		Date : 11102011			Material : SS41
		Checked by : Wisnu			Sign. :
		A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY				Operation Turning	Dwg. Nr. 1304
Origin.	Rep.		Rep.by.		Sn. Ns.

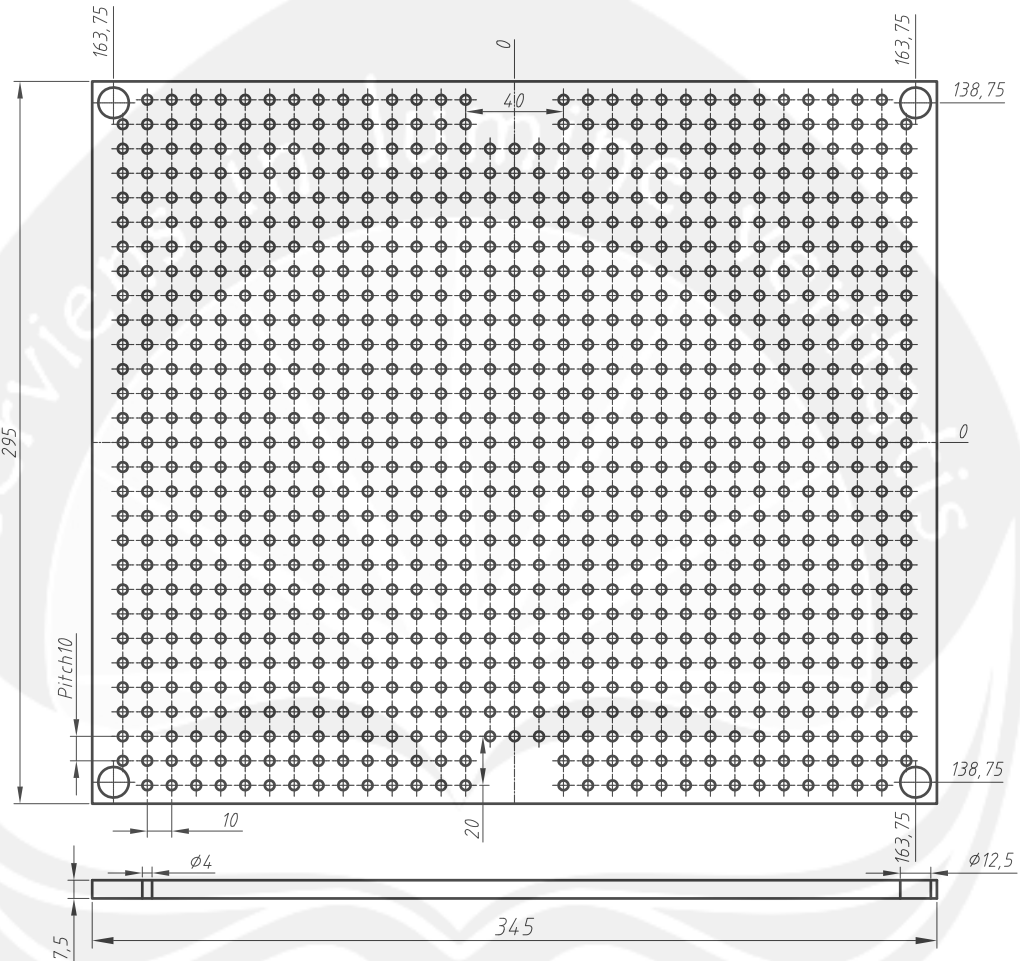


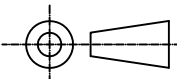
1	Core stand	3				
Pieces	Description	Item	Material	Dimension	Remarks	
Revision Index		Drawn by : Galih		Scale : 1:1		
		Reg. Nr. : 101606381		Unit : mm		
		Date : 11102011		Material : SS41		
		Checked by : Wisnu		Sign. :		
		A4	MESIN VACUUM THERMOFORMING OTOMATIS			
INDUSTRIAL ENGINEERING UAJY				Operation Milling Welding	Dwg. Nr. 1303	
Origin.		Rep.		Rep.by.		Sn. Ns.

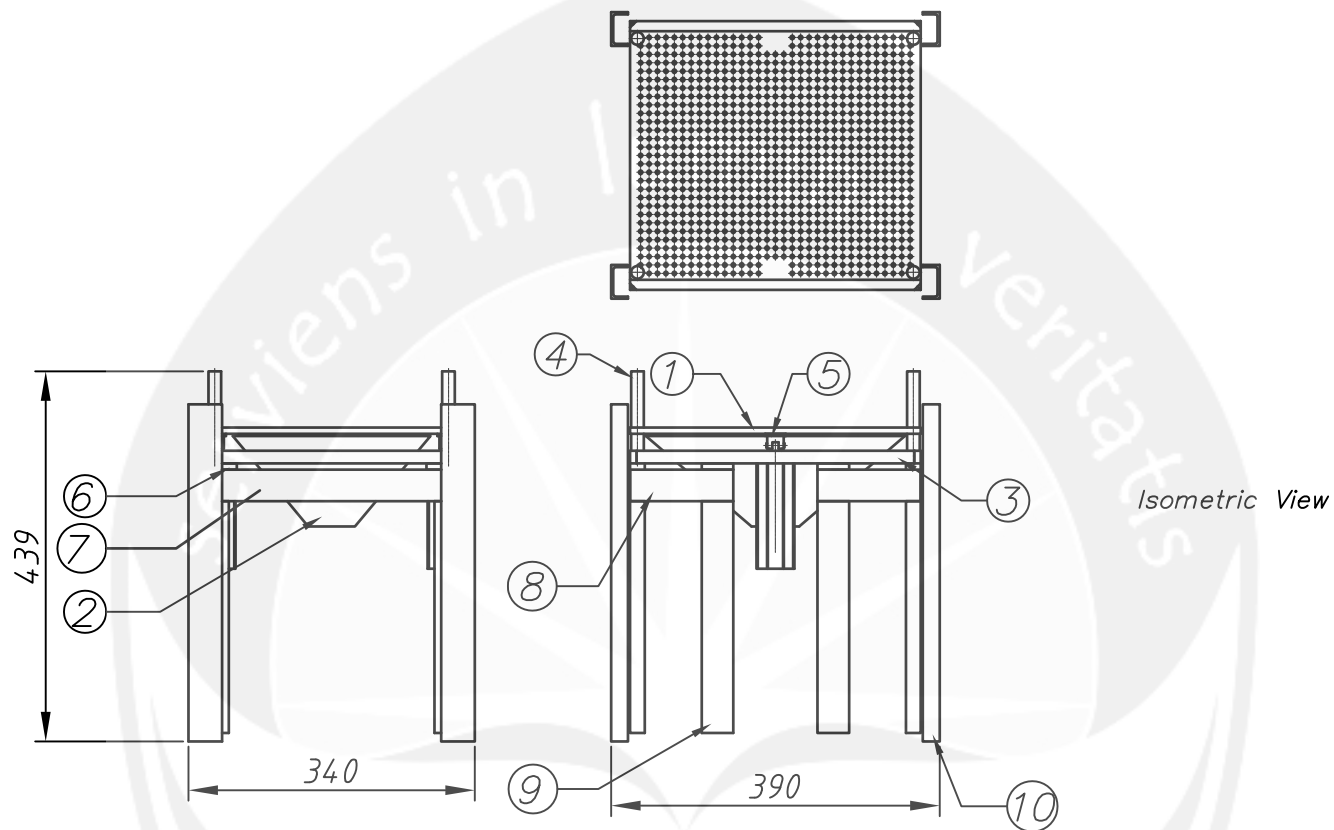
Assy profile with join Welding

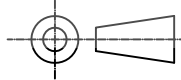


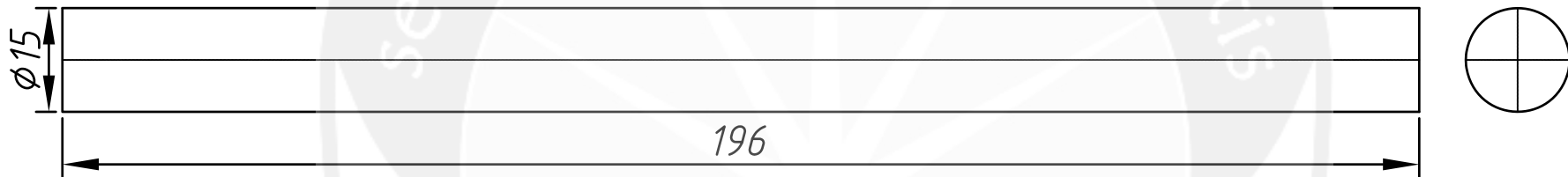
1	Vacuum funnel	2			
Pieces	Description	Item	Material	Dimension	Remarks
Revision Index		Drawn by : Galih		Scale : 1:1	
		Reg. Nr. : 101606381		Unit : mm	
		Date : 11102011		Material : SS41	
		Checked by : Wisnu		Sign. :	
		A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY				Operation Cutting Welding	Dwg. Nr. 1302
Origin.		Rep.		Rep.by.	Sn. Ns.

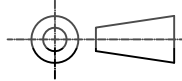


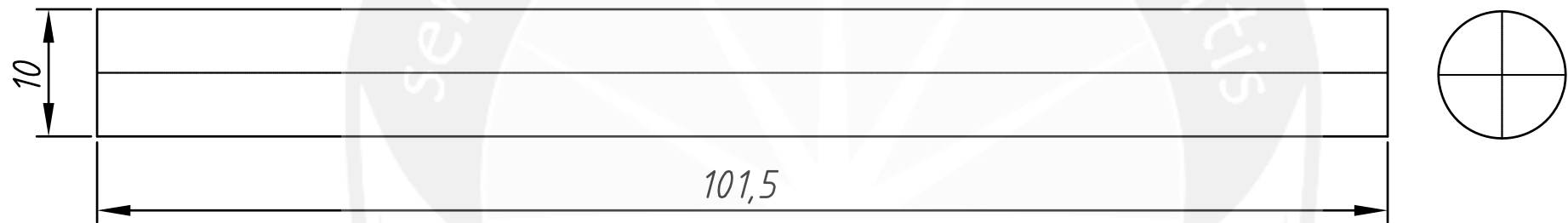
1	Core stand	1			
Pieces	Description	Item	Material	Dimension	Remarks
Revision Index		Drawn by : Galih			Scale : 1:1
		Reg. Nr. : 101606381			Unit : mm
		Date : 11102011			Material : SS41
		Checked by : Wisnu			Sign. :
		A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY			Operation CNC Milling		Dwg. Nr. 1301
Origin.		Rep.		Rep.by.	Sn. Ns.

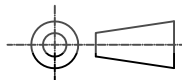


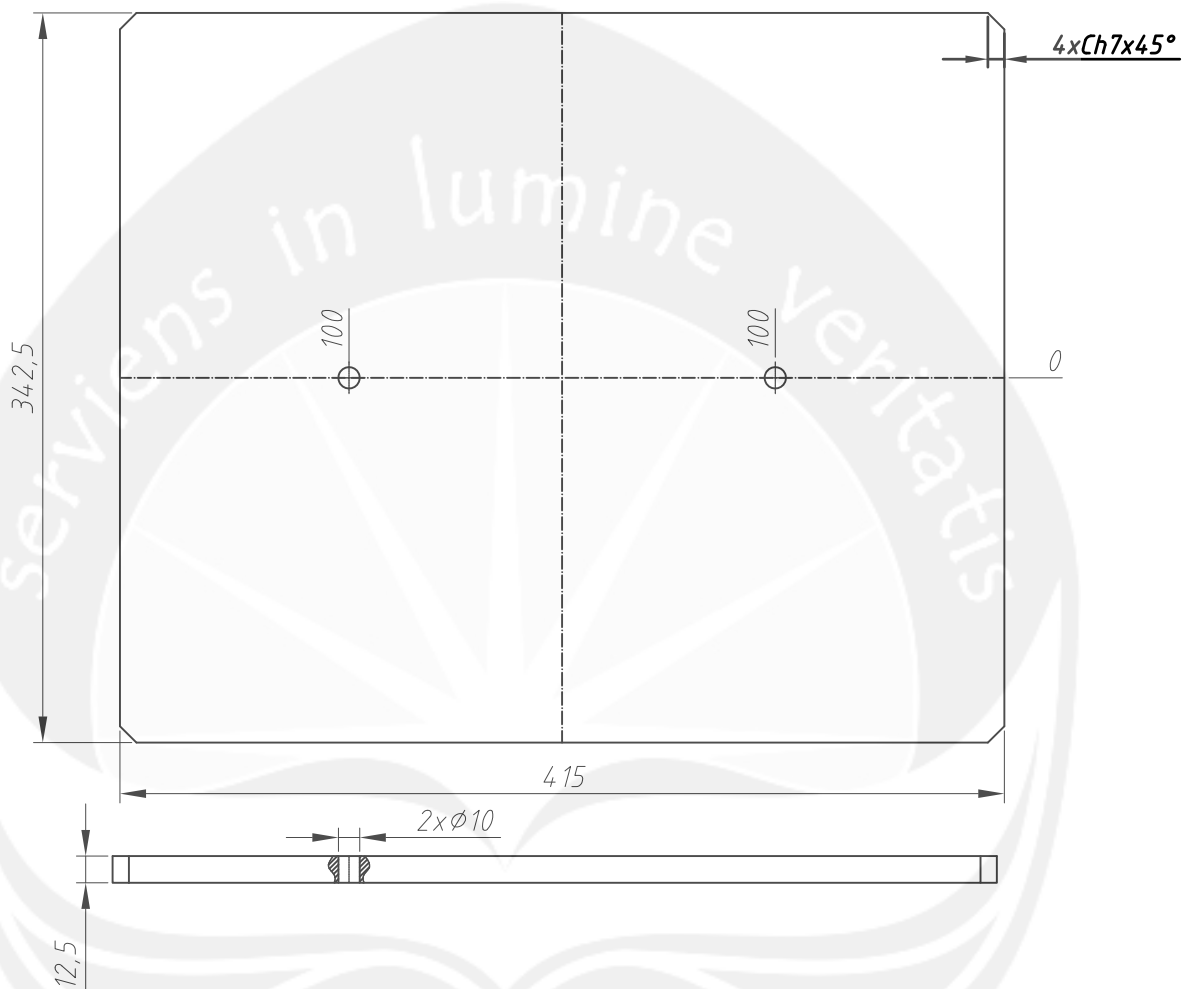
	Sub Assy 3 (Vacuum Unit)						
Pieces	Description		Item	Material	Dimension	Remarks	
Revision Index			Drawn by : Galih		Scale : 1:1		
			Reg. Nr. : 101606381		Unit : mm		
			Date : 11102011		Material :		
			Checked by : Wisnu		Sign. :		
			A4	MESIN VACUUM THERMOFORMING OTOMATIS			
INDUSTRIAL ENGINEERING UAJY					Operation		Dwg. Nr. 1300
Origin.		Rep.		Rep.by.		Sn. Ns.	

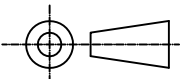


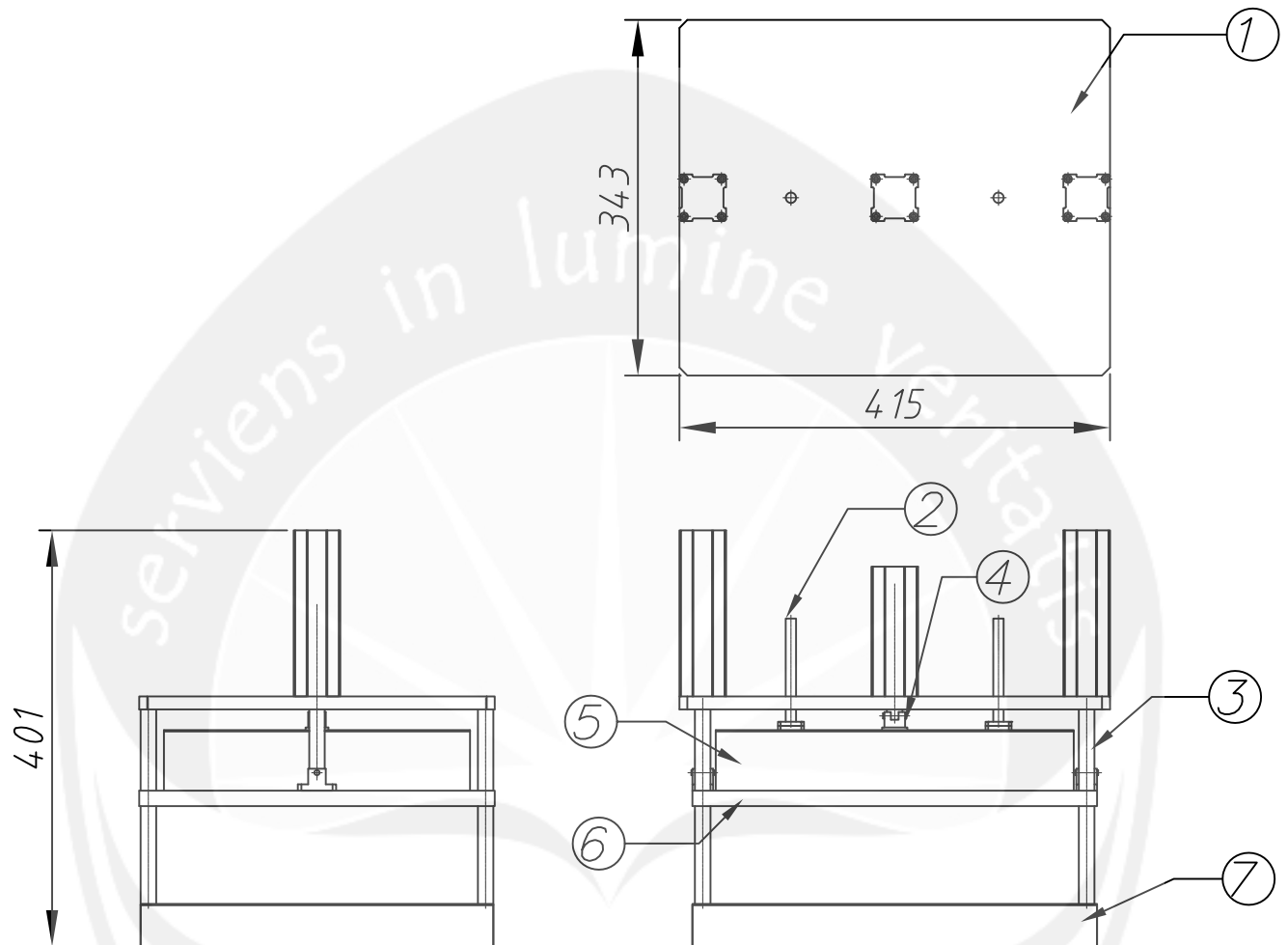
4	Clamp 1 guide	3			
Pieces	Description	Item	Material	Dimension	Remarks
Revision Index		Drawn by : Galih			Scale : 1:1
		Reg. Nr. : 101606381			Unit : mm
		Date : 11102011			Material : SS41
		Checked by : Wisnu			Sign. :
		A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY				Operation Turning	Dwg. Nr. 1203
Origin.		Rep.		Rep.by.	Sn. Ns.

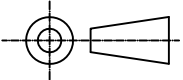


2	Heater guide	2			
Pieces	Description	Item	Material	Dimension	Remarks
Revision Index		Drawn by : Galih			Scale : 1:1
		Reg. Nr. : 101606381			Unit : mm
		Date : 11102011			Material : SS41
		Checked by : Wisnu			Sign. :
		A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY				Operation Turning	Dwg. Nr. 1202
Origin.		Rep.		Rep.by.	Sn. Ns.

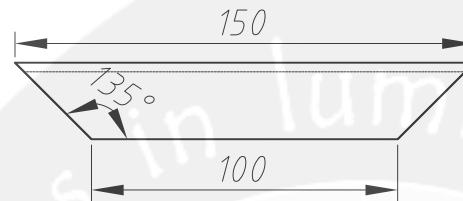


1	Base plate	1			
Pieces	Description	Item	Material	Dimension	Remarks
Revision Index		Drawn by : Galih		Scale : 1:1	
		Reg. Nr. : 101606381		Unit : mm	
		Date : 11102011		Material : SS41	
		Checked by : Wisnu		Sign. :	
		A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY				Operation Cut Drill	Dwg. Nr. 1201
Origin.	Rep.		Rep.by.		Sn. Ns.

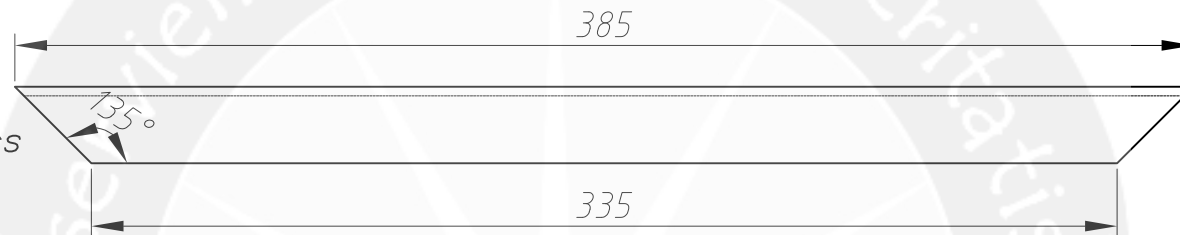


	Sub Assy 2 (Heater Unit)						
Pieces	Description		Item	Material	Dimension	Remarks	
Revision Index			Drawn by : Galih		Scale : 1:1		
			Reg. Nr. : 101606381		Unit : mm		
			Date : 11102011		Material :		
			Checked by : Wisnu		Sign. :		
			A4	MESIN PEMOTONG LEMBARAN PLASTIK			
INDUSTRIAL ENGINEERING UAJY					Operation Cut Drill		Dwg. Nr. 1200
Origin.		Rep.		Rep.by.		Sn. Ns.	

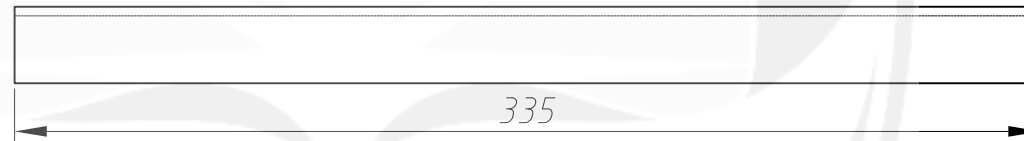
Item 6
Qty 2 pcs



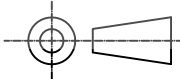
Item 8
Qty 2 pcs

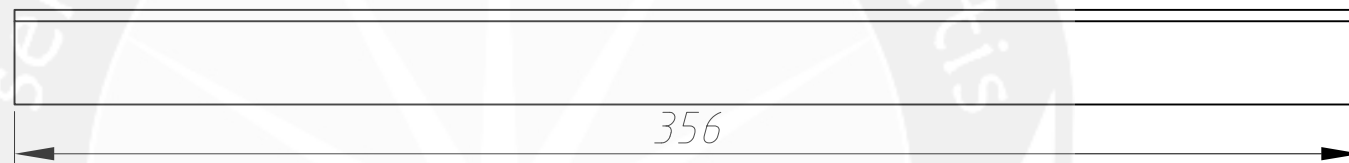
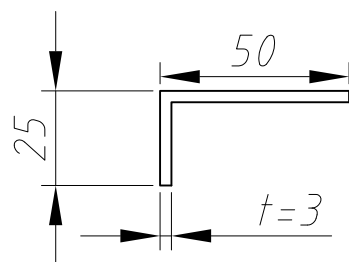


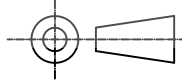
Item 9
Qty 3 pcs



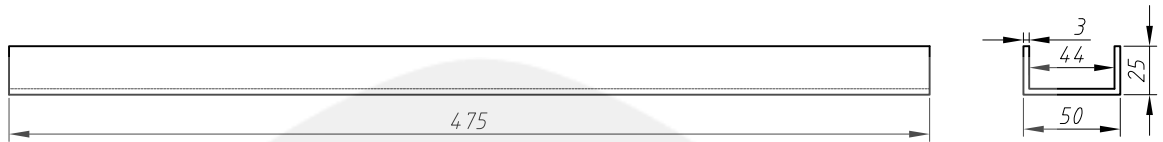
Note :
All Item 6,8,9 profile U
material same

	Frame				
Pieces	Description	Item	Material	Dimension	Remarks
Revision Index		Drawn by : Galih			Scale : 1:1
		Reg. Nr. : 101606381			Unit : mm
		Date : 11102011			Material :
		Checked by : Wisnu			Sign. :
		A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY				Operation Cutting	Dwg. Nr.
Origin.	Rep.		Rep.by.		Sn. Ns.

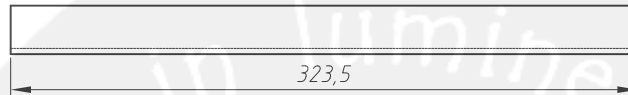


2	profil L	4	profil L		
Pieces	Description	Item	Material	Dimension	Remarks
Revision Index		Drawn by : Galih		Scale : 1:1	
		Reg. Nr. : 101606381		Unit : mm	
		Date : 11102011		Material : profil L	
		Checked by : Wisnu		Sign. :	
		A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY				Operation Cut Drill	Dwg. Nr. 1104
Origin.		Rep.		Rep.by.	Sn. Ns.

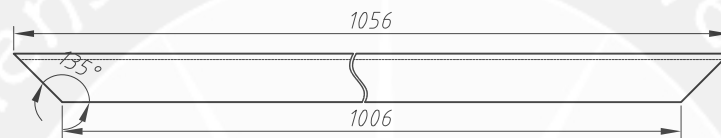
Item 1
Qty 2 pcs



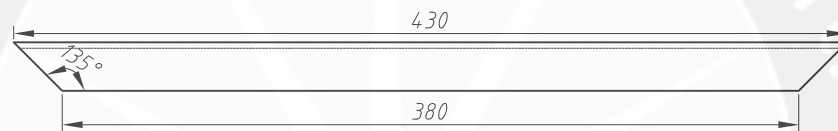
Item 2
Qty 4 pcs



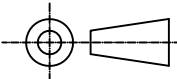
Item 3
Qty 2 pcs

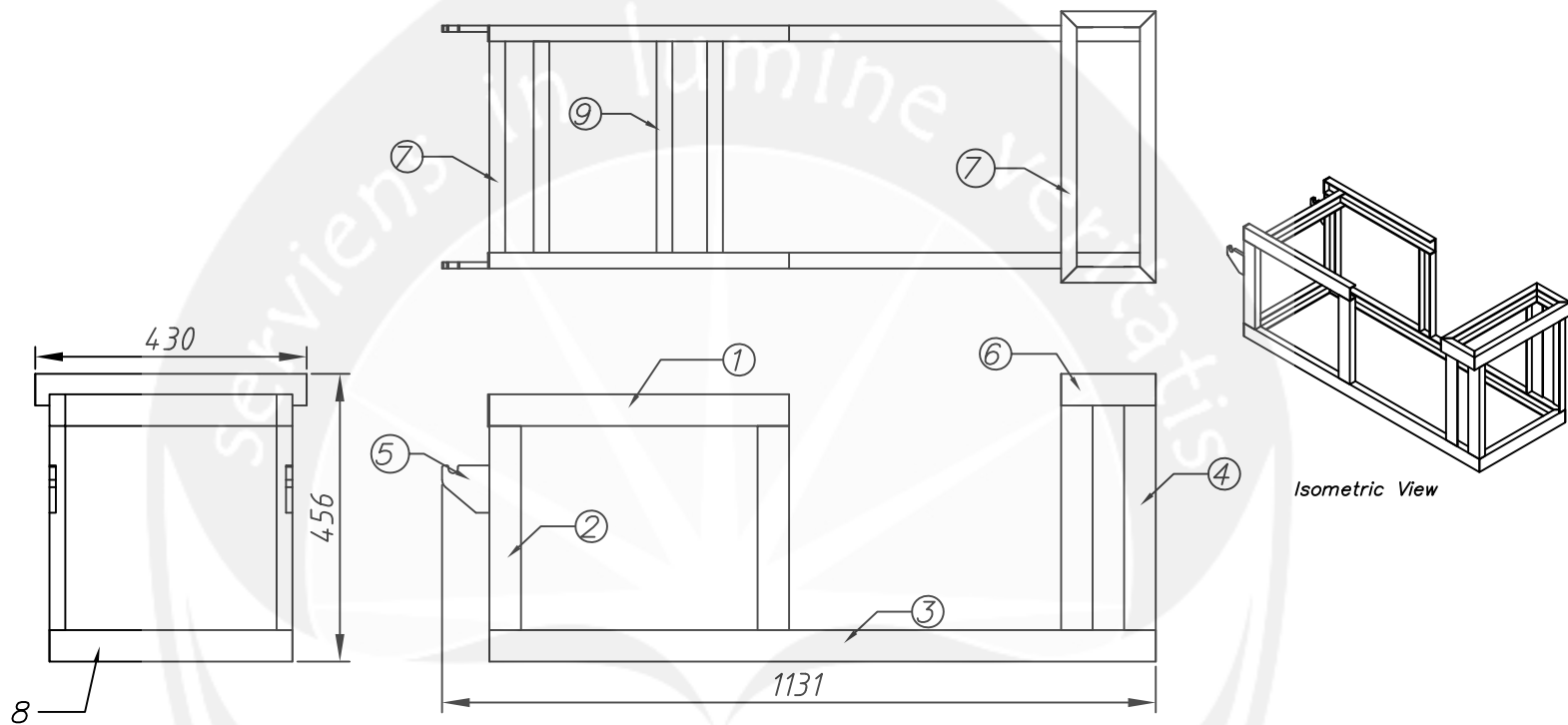


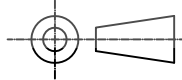
Item 7
Qty 2 pcs

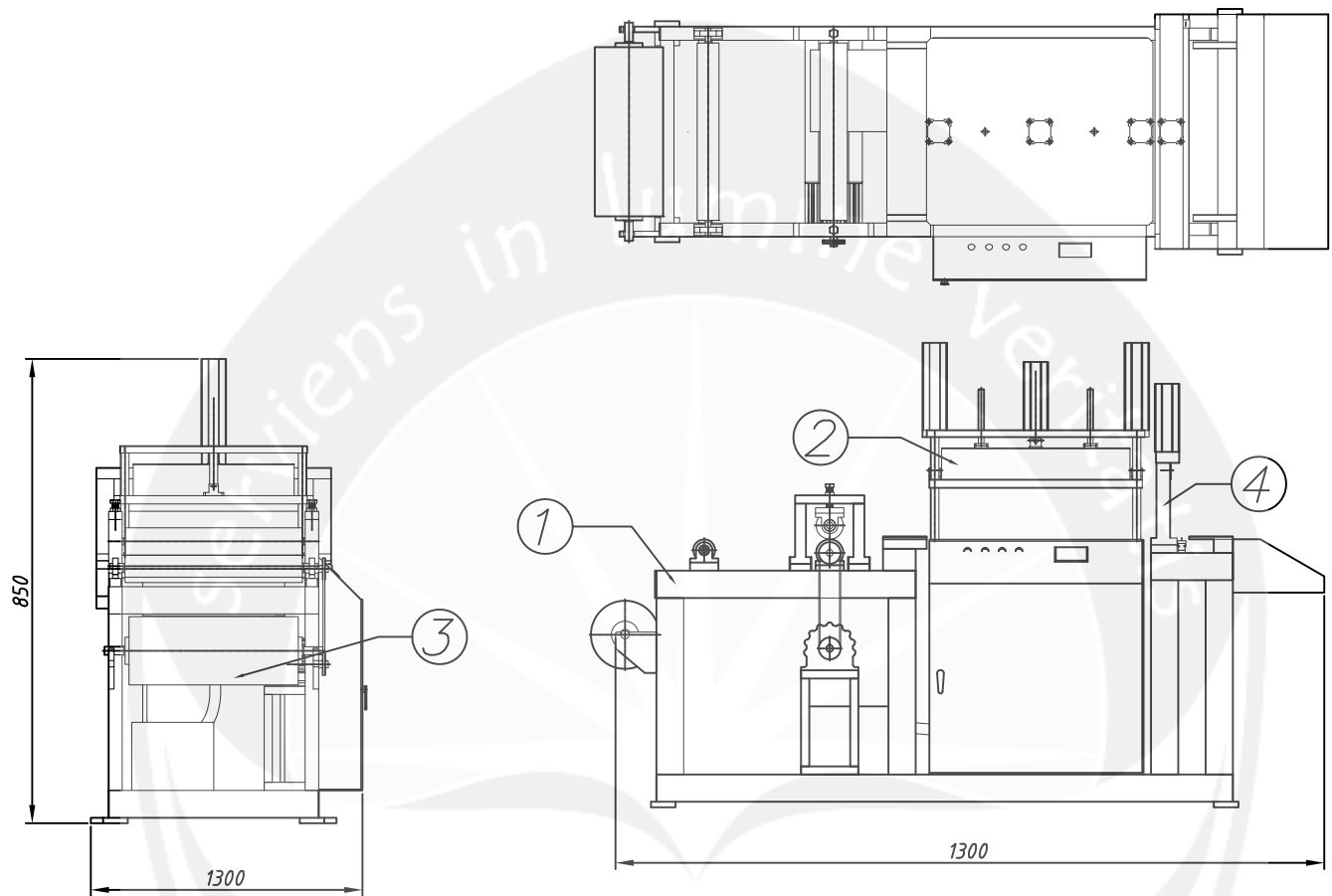



Note :
All Item 1,2,3,&7 profile U
material same

	profil U					
Pieces	Description		Item	Material	Dimension	Remarks
Revision Index			Drawn by : Galih			Scale : 1:1
			Reg. Nr. : 101606381			Unit : mm
			Date : 11102011			Material : profil U
			Checked by : Wisnu			Sign. :
			A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY				Operation Cutting	Dwg. Nr.	
Origin.		Rep.		Rep.by.		Sn. Ns.



	Sub Assy 1 (Main frame)					
Pieces	Description		Item	Material	Dimension	Remarks
Revision Index			Drawn by : Galih		Scale : 1:1	
			Reg. Nr. : 101606381		Unit : mm	
			Date : 11102011		Material : profil U	
			Checked by : Wisnu		Sign. :	
			A4	MESIN VACUUM THERMOFORMING OTOMATIS		
INDUSTRIAL ENGINEERING UAJY					Operation Cutting Welding	Dwg. Nr. 1100
Origin.		Rep.		Rep.by.		Sn. Ns.



	Sub Assy 1 (Main Frame)	1			1100	
	Sub Assy 2 (Heater Unit)	2			1200	
	Sub Assy 3 (Vacuum Unit)	3			1300	
	Sub Assy 4 (Cutter Unit)	4			1400	
Pieces	Description	Item	Material	Dimension	Remarks	
Revision Index		Drawn by : Galih		Scale : 1:1		
		Reg. Nr. : 101606381		Unit : mm		
		Date : 11102011		Material :		
		Checked by : Wisnu		Sign. :		
		A4	MESIN VACUUM THERMOFORMING OTOMATIS			
INDUSTRIAL ENGINEERING UAJY				Operation		Dwg. Nr. 1000
Origin.		Rep.		Rep.by.		Sn. Ns.